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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/062,141	01/31/2002	Richard W. Sexton	SDP271PA	2522

1333 7590 07/27/2004  
PATENT LEGAL STAFF  
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EXAMINER

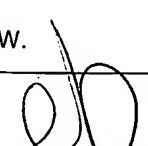
CHEA, THORL

ART UNIT PAPER NUMBER

1752

DATE MAILED: 07/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/062,141	SEXTON, RICHARD W.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Thorl Chea	1752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 1-10, 19 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Applicant's election without traverse of Group II, claims 11-18 in the reply filed on May 17, 2004 is acknowledged.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 11-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. There is no antecedent basis for the term "the conductive layer" , the "structure", and the electroformed structure in claim 11, line 6; lines 7-8; and lines 9-10, 12 respectively. See the language "the conductive layer", "to electroform the structure", and "the electroformed structure". The "electroformed structures" in the preamble is in plural form, and there no term "structure" has been used.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

#### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 11-18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hulderman et al (Hulderman).

See Figs in Sheet 7-9, Figs 12A to 12H; Figs. 13A to 13D; Figs 14A to 14G which contains photoresist layer and the metal layer (Fig 13D; 14F) wherein the photoresist layer was removed after the formation of metal layer. The anticipation of the claimed invention is based on the mandrel having a substrate, a controlled-release layer and a conductive metal layer within the meaning taught in Hulderman; the limitation provided in the claims “(t)he mandrel and the controlled-release layer provide sufficient adhesion to the substrate base to prevent the electroformed structure from delaminating from the substrate during the electroforming processes and still provide mean to remove the electroformed structure from the substrate base without damage to either the electroformed structure or the substrate” fails to further structural limitation of the confusing language set forth in the paragraph above, and is considered as an inherent characteristic associated with the substrate, the photoresist layer and the conductive layer. Alternatively, it would have been obvious to use the process taught in Hulderman using the substrate, photoresist layer and the electroform process to provide a diverse structure.

7. Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Lam et al (US Patent No. 4,773,971). The invention as claimed is read on the mandrel of claim 8 in column 6 of Lam et al which having a glass substrate, an adhesion sheet layer and a stainless steel sheet layer. The adhesion layer and steel layer encompass the scope of controlled-release layer and a

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conductive layer claimed in the present claimed invention. Therefore, the claimed invention lacks novelty.

### ***Response to Arguments***

8. Applicant's arguments filed May 17, 2004 have been fully considered but they are not persuasive. The material in Fig.14 F still read on the claimed mandrel since material has a substrate, a photoresist layer and conductive layer. The control-releasable layer claimed in the present invention and disclosed in the specification includes the photoresist composition, and photoresist layer is adhere to the substrate and present the electroform structure from the substrate, and the electroformed structure is removed from the substrate and photoresist layer. The argument with respect to ink jet printing application is direct to intended use of the mandrel having a release layer and the conductive layer that can be used in the electroformed process. Moreover, the language such as the use of the mandrel in the formation of an orifice plated for used in the ink jet system is not presented in the claimed invention, but "A mandrel for used in a dimensional electroformed structures", which encompasses any structure taught in Hulderman et al.

### ***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on M-F (9:00 - 5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H Kelly can be reached on (571) 272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tchea  
July 19, 2004

Thorl Chea  
Primary Examiner  
Art Unit 1752

A handwritten signature in black ink, appearing to read 'Thorl Chea', is written over the printed name and title.